UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/751,469	12/29/2000	Frank J. Weisser JR.	00767	7167

7590 06/28/2004

JONNATHAN C. PARKS, ESQ.
KIRKPATRICK & LOCKHART, LLP
HENRY W. OLIVER BUILDING
535 SMITHFIELD STREET
PITTSBURGH, PA 15222-2312

EXAMINER	
CHANG, JUNGWON	
ART UNIT	**PAPER NUMBER**
2154	8

DATE MAILED: 06/28/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	09/751,469	WEISSER ET AL.
	Examiner	Art Unit
	Jungwon Chang	2154

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *25 October 2001*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-23* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-23* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date 7.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1-23 are presented for examination.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Skog et al. (US 6,385,650), hereinafter Skog, in view of Taylor (US 6,507,565).

4. As to claims 1 and 7, Skog discloses the invention substantially as claimed including an object-oriented system (i.e., object oriented system; col. 5, lines 63-66) for one of relating network elements (20, fig. 1; col. 6, lines 10-18) to a customer (i.e., subscriber) (col. 6, lines 44-49) and relating a customer to the network elements (col. 6, lines 44-49), the system comprising:

a network element data module (20, fig. 1; 20A, fig. 6; col. 6, lines 10-18) containing network element data (i.e., hardware elements, 21-24, fig. 1) arranged in a form that can be manipulated using an object-oriented application (col. 7, lines 27-38);

a customer data module (col. 6, lines 44-45; col. 1, lines 52-55); and

the network element data module (i.e., 43, 44, 48-55, fig. 4) and the customer

data module (41, 42, fig. 4) for creating an object-oriented module of the network elements (fig. 4; col. 5, lines 63-66; col. 6, line 63 – col. 7, line 10);

a plurality of sub-tree layers (i.e., sub-trees, col. 1, lines 16-17 and 32-33; col. 4, lines 9-19), wherein each layer represents a layer of abstraction (i.e., route, trunk, line interface (lic), fig. 4), wherein a root (i.e., root; col. 1, lines 16-17; col. 9, lines 31-32) represents the highest sub-tree layer (fig. 4; col. 7, lines 8-10) and the highest level of abstraction (i.e., ISDN, fig. 4); and

a plurality of unique customer identifiers (i.e., unique subscriber name; subscriber 1234567, 41, fig. 4; subscriber 1235555, 42, fig. 4; col. 2, lines 2-4 and 31-34; col. 7, lines 5-7) assigned to network elements that relate the customer to certain network element (i.e., connecting the subscriber identifiers (i.e., subscriber names) to the network element (i.e., line, 11, 12, fig. 4; col. 6, lines 44-48).

5. Skog discloses connecting the subscriber identifiers (i.e., subscriber names) to the network element (i.e., line, 11, 12, fig. 4; col. 6, lines 44-48). However, Skog does not specifically disclose a mapping module in communication with the network element data module and the customer data module. Taylor discloses a mapping module in communication with the network element data module (12, fig. 1; col. 2, lines 53-58; col. 2, line 66 – col. 3, line 8) and the customer data module (col. 3, lines 28-32) (i.e., identifying a corresponding subscriber that is assigned to a network element (i.e., a particular port, circuit identifier); col. 4, lines 59-66; col. 5, lines 10-20). It would have been obvious to one of ordinary skill in the art at the time the invention was made to

combine the teachings of Skog and Taylor because Taylor's mapping module would improve the reliability of Skog's system by allowing a network management system to identify what type of services the customer receives from the network elements.

6. As to claim 2, Skog discloses the network element data module and the customer data module are a network management system (col. 1, lines 9-17; col. 3, lines 27-35 and 40-58).

7. As to claims 3 and 8, Skog discloses assigning the unique customer identifier to the network element at a lowest abstraction layer (i.e., sending the unique customer identifier (30, fig. 1; 41, 42, fig. 4) to make a connection to the lowest abstraction layer (i.e., lic, 23, fig. 1; 55. fig. 4; col. 6, lines 16-18).

8. As to claims 4 and 9, Skog discloses assigning the unique customer identifier to the network element at a second lowest abstraction layer when all of the network elements in the lowest abstraction layer provide service to the same customer (i.e., sending the unique customer identifier (30, fig. 1; 41, 42, fig. 4) to make a connection to the second lowest abstraction layer (i.e., trunk, fig. 1; 50. fig. 4) via the lowest abstraction layer (i.e., lic, 23, fig. 1; 55. fig. 4) (col. 6, lines 48-61).

9. As to claims 5 and 10, Skog discloses a service management sub-tree layer wherein each supported service has a set of instances corresponding to the network

elements that provide the service (i.e., all the network element (i.e., managed object) are given an instance name upon creation; col. 2, lines 24-34; col. 6, lines 63-65).

10. As to claims 6 and 11, Skog discloses the unique identifier comprises a predetermined character string, and wherein each string having a series of substrings, and wherein each substring corresponds to a network element having a relationship with the customer (i.e., all the network element (i.e., managed object) are given an instance name upon creation and every network element has a distinguished name, wherein the name is unique; col. 2, lines 24-34; col. 6, lines 63-65).

11. As to claims 12 and 16, they are rejected for the same reasons set forth in claims 1 and 7 above. In addition, Skog discloses gathering network element data (i.e., collection of network element data, i.e., hardware elements, 21-24, fig. 1; col. 7, lines 21-26); arranging the network element data in a form that can be manipulated using an object-oriented application (col. 7, lines 27-38); and gathering customer data (col. 6, lines 44-45; col. 1, lines 52-55).

12. As to claims 13 and 17, Skog discloses relating a customer to a service when a network element may provide multiple services (i.e., providing the equipment and the services by the network elements; col. 1, lines 41-45).

13. As to claims 14, 15, 18 and 19, Skog discloses manipulating the network

elements (col. 7, lines 27-38). When the network elements are manipulated (i.e., updated, changed the status of the network elements), the customer who receives a service from the network element needs to configure its updated network elements. Yaylor discloses updating the relationship between the network elements and the customer identifiers in accordance with the assigning step (col. 3, line 57 – col. 4, line 1; col. 4, lines 23-36; col. 6, lines 25-38). However, Skog does not specifically disclose updating the relationship between the network elements and the customer identifiers in accordance with the assigning step. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Skog and Taylor because Taylor's updating the relationship between the network elements and the customer identifiers would improve the occurrence of status changing in the network elements relating to the customer.

14. As to claim 20, it is rejected for the same reasons set forth in claims 1, 7, 12 and 16 above. In addition, Skog discloses a computer-readable medium (i.e., memory, storage) having stored thereon instructions (i.e., algorithms) which, when executed by a processor (i.e., computer) (col. 3, lines 44-58 and 61-66; col. 4, lines 38-44; col. 5, lines 14-20).

15. As to claim 21, Skog discloses relating a customer to a service when a network element may provide multiple services (i.e., providing the equipment and the services by the network elements; col. 1, lines 41-45).

16. As to claims 22 and 23, Skog discloses manipulating the network elements (col. 7, lines 27-38). When the network elements are manipulated (i.e., updated, changed the status of the network elements), the customer who receives a service from the network element needs to configure its updated network elements.

Taylor discloses updating the relationship between the network elements and the customer identifiers in accordance with the assigning step (col. 3, line 57 – col. 4, line 1; col. 4, lines 23-36; col. 6, lines 25-38). However, Skog does not specifically disclose updating the relationship between the network elements and the customer identifiers in accordance with the assigning step. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Skog and Taylor because Taylor's updating the relationship between the network elements and the customer identifiers would allow the network management system to aware of the occurrence of status changing in the network elements relating to the customer.

Conclusion

17. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

Traversat et al, patent 6,366,954, Sato et al, patent 6,400,689, Bass et al, patent 6,744,446, Hsieh et al, patent 6,512,824, Leroux et al, patent 6,717,909, Gulliford et al, patent 6,618,355, Du et al, patent 6,748,432 disclose network service management for managing network elements and customer service.

18. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jungwon Chang whose telephone number is (703)305-9669. The examiner can normally be reached on 9:30-6:00 (Monday-Friday).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John A Follansbee can be reached on (703)305-8498. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JWC
June 23, 2004

ZARNI MAUNG
PRIMARY EXAMINER